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ABSTRACT

This is a report of the development of a Faculty-Course Questionnaire (FCQ) evaluation instrument at the University of Colorado. The evaluation process is computer based and is similar in several ways to that used for processing and reporting the results of the Strong Vocational Interest Blank at the University of Colorado. A computerized feedback system was developed which allowed for considerable flexibility. In addition to the availability of practically an unlimited number of optional questions that are individually preprinted by computer, the chief advantage of this procedure is that each instructor of a course receives detailed and comprehensive information that is individually specific and at the same time allows comparisons with various norm groups within the university. The instructor also receives subjective responses by students on the backside of the questionnaire which asks for the most and least effective aspects of the course and utilizes the critical incidence technique. There is a two page feedback system which gives one page of numerical and normative feedback while the second page is designed to give a verbal report (page 2 is still under development). This is another example of how the use of the computer has opened the door to a new dimension in innovation in evaluation. (Author)

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INNOVATION IN FACULTY-COURSE EVALUATION AND FEEDBACK

by

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University of Colorado

The idea of evaluating courses and instructors at the college level is not new. Although such evaluations have been used for a long time they are criticized frequently as:

1. too expensive
2. lacking in flexibility and adaptability
3. focusing on items that measure popularity or personality
4. containing negatively worded items
5. lacking understandable or appropriate output or feedback
6. returned to the instructor too late for use the following term
7. not related to innovative teaching situations
8. lacking in statistical analysis of data or overloaded with statistical concerns
9. lacking in appropriate normative comparisons
10. lacking in impact on teaching effectiveness

This is a report of the development of a Faculty-Course Questionnaire (FCQ) evaluation instrument at the University of Colorado. Approximately three years ago, the University Committee on Effective Teaching asked the Student Life Center to develop and administer the faculty-course evaluation program. The University Examiner was given the specific responsibility for

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developing the instrument based on certain computerized techniques he had already developed for use with the Strong Vocational Interest Blank. The Student Life Center director, Dr. Ronald Taylor, also contributed significantly to the developmental process. After writing, sorting, and revising a huge pool of items, a preliminary draft was prepared which was carefully evaluated by both students and faculty. A small pilot project was carried out.

The new copyrighted questionnaire was first used in the fall of 1972 with 25,000 questionnaires scored for about 300 faculty members. Both the questionnaire and the computerized feedback were enthusiastically received and in the spring of 1973, 43,000 questionnaires were evaluated for over 650 faculty members and 1200 courses. Two questions were added to the core question list and several questions were reworded slightly before the fall of 1973.

A computerized feedback system was developed which allowed for considerable flexibility. In addition to the availability of practically an unlimited number of optional questions that are individually pre-printed by computer, the chief advantage of this procedure is that each instructor of a course receives detailed and comprehensive information that is individually specific and at the same time allows comparisions with various norm groups within the University. The instructor also receives subjective responses by students on the backside of the questionnaire which asks for the most and least effective aspects of the course and utilizes the critical incidence technique.

The feedback system designed for University of Colorado faculty consists of two pages. Page one features a summary statement of the content of each question followed by an A-E average alphabetical rating, a frequency tally of the responses to each question (A=4.0 which is positive and E=0.0 which is negative, with not-applicable and blank responses also tallied but deleted

from further analysis), departmental average scores and standard deviations for each question, a minus or plus mark noting how each faculty member's rating differs from the average of all departmental participants, the average score on each question for the faculty member, a minus or plus mark noting how each faculty member's rating differs from the average of all departmental participants, the average score on each question for the faculty member, a minus or plus mark noting how each faculty member's rating differs from the total participants of the university and finally the average score and standard deviation for each question based on the total university participants.

In addition to this basic information on all 27 core questions, there is a tally of responses and an average score for each of up to 16 optional questions selected individually by each faculty member from the 162 available questions. These optional questions are preprinted by computer for each specific course.

This single page of output has served the needs of the faculty for four semesters and it has received very positive and enthusiastic support. The cost of the Faculty Course evaluation was cut in half, the flexibility and adaptability was increased fantastically, the items were focused entirely on teaching effectiveness rather than instructor popularity, all items were stated positively, the computerized feedback contained both a simple alphabetical rating for those who dislike numerical analysis and adequate numerical data for most of the statistically oriented faculty as well as helpful student comments for those who claim evaluations cannot be objectified. The turn-around time was less than three weeks which included the development of all norms, the analysis and processing of data, the packaging and distribution of results. The teachers of unique courses or those teachers using unique procedures had the chance to supply their own optional questions. The

SPECIAL COLORADO SPRINGS CAMPUS REPORT

[redacted] DEPT=104 COURSE=420 SECTION= 1 FALL 1973 RESPONSES/REQUESTS= 19/ 35 CAMPUS=5

YOUR CONFIDENTIAL FACULTY-COURSE QUESTIONNAIRE REPORT WAS CONDENSED INTO AN AVERAGE RATING AND COMPARED TO DEPARTMENTAL AND COLO. SPR. PARTICIPANTS. EVEN A LOW RATING WITHIN THIS SELECT GROUP OF PARTICIPANTS IS PROBABLY ABOVE AVERAGE FOR THE TOTAL COLO. SPR. SINCE THE AVERAGES WERE GENERALLY HIGH. BLANK(BL) AND NON-APPLICABLE(NA) RESPONSES WERE TALLIED AND REPORTED AS RESPONSE FREQUENCIES BUT WERE EXCLUDED FROM OTHER ANALYSES.
SEE ALSO LOWER DIV.(LD), UPPER DIV.(UD), GRAD.(GR), SMALL, MEDIUM AND LARGE CLASS AVERAGES. IF QUESTIONS CALL X6766.

ITEM NO.	SUMMARY STATEMENT	AVE. *RATING	BL	NA	E	D	C	B	A	**DEPT. SIGMA	**DEPT. AVE.	DIFFER FROM DEPT.	YOUR AVE.	DIFFER FROM CAMPUS	CAMPUS AVE.	CAMPUS SIGMA	COLO. SPR. PARTICIPANTS LEVEL LD	LEVEL UD	LEVEL GR	SMALL 1-20	MED. 50-99	LRG. 250+
1	PREPARATION	B	0	0	0	3	1	5	9	(.96)	3.36	-	3.11	-	3.49	(.81)						
2	RESPECT ST. IDEAS	B	0	0	1	0	2	9	6	(.94)	3.14	-	3.06	-	3.41	(.81)						
3	EFFECTIVE TEACHER	B	0	0	1	3	3	4	7	(1.14)	2.97	-	2.72	-	3.15	(1.00)						
4	LECTURES	B	0	0	1	3	2	6	6	(1.10)	2.92	-	2.72	-	3.11	(1.01)						
5	ENTHUSIASTIC	B	0	0	0	5	1	6	6	(1.03)	3.24	-	2.72	-	3.34	(.88)						
6	KNOWLEDGEABLE	B	0	0	0	2	1	7	8	(.87)	3.57	-	3.17	-	3.68	(.66)						
7	SPOKE CLEARLY	B	0	0	0	0	2	8	8	(.94)	3.18	+	3.33	-	3.57	(.73)						
8	SUMMARIZE	B	0	0	0	0	6	5	7	(1.02)	2.78	+	3.06	-	3.07	(.96)						
9	STIMULATE THINKING	B	0	0	2	0	4	10	2	(1.09)	2.75	-	2.56	-	3.13	(.97)						
10	SPOT CONFUSION	B	0	0	0	2	3	7	6	(1.07)	2.72	+	2.94	+	2.93	(.99)						
11	MOTIVATE EXPLOR.	B	0	0	1	1	4	6	6	(1.11)	2.48	+	2.33	+	2.72	(1.05)						
12	DISCUSSIONS	B	0	1	0	3	3	7	4	(.90)	2.81	-	2.71	-	3.09	(.95)						
13	OBTAINABLE ASSIGN.	B	0	0	0	0	4	4	10	(.74)	3.53	-	3.33	-	3.37	(.86)						
14	FEEDBACK	B	0	0	1	3	3	6	5	(1.19)	2.42	+	2.61	-	2.89	(1.04)						
15	CLARIFICATION	B	0	0	0	0	5	8	5	(1.01)	2.85	+	3.00	-	3.03	(.96)						
16	WORTHWHILE ASSIGN.	B	0	0	2	1	4	8	3	(1.00)	2.91	-	2.50	-	3.07	(.97)						
17	AVAILABLE	B	0	0	2	1	5	4	6	(1.17)	2.80	-	2.61	-	3.24	(.94)						
18	APPROACHABLE	A	0	0	0	0	0	7	12	(.89)	3.36	+	3.61	+	3.50	(.79)						
19	EFFECTIVE COURSE	B	0	0	1	3	0	6	8	(1.21)	2.97	-	2.94	-	3.15	(1.04)						
20	EXAMPLES	B	0	0	0	3	5	7	3	(.91)	3.14	-	2.56	-	3.29	(.87)						
21	TEST KEY PTS.	D	0	0	6	7	2	2	1	(1.40)	2.01	-	1.17	-	3.09	(1.05)						
22	FAIR GRADES	B	0	0	1	1	3	3	10	(1.19)	3.01	+	3.11	-	3.34	(.89)						
23	EXPLAINED ASSIGN.	B	0	0	0	1	2	5	10	(.94)	3.25	+	3.33	+	3.25	(.96)						
24	TEACHING AIDS	B	0	0	1	0	1	10	6	(.89)	3.14	-	3.11	+	3.02	(.98)						
25	LIBRARY MATERIALS	B	0	1	1	0	6	3	7	(1.05)	2.63	+	2.88	+	2.76	(1.06)						
26	COURSE RATING	B	0	0	0	4	2	10	2	(1.07)	2.70	-	2.56	-	3.02	(1.01)	3.05	2.77	2.60	2.70	2.88	3.03
27	INSTRUCTOR RATING	B	0	0	0	2	3	5	8	(1.07)	2.97	+	3.06	-	3.28	(.96)	3.24	3.00	3.01	3.02	3.08	3.23

THE FOLLOWING CONTENT SUBSCALES WITH ITEM NUMBERS ARE GROUPS OF ITEMS THAT HAVE RELATED CONTENT AND SIGNIFICANT INTERCORRELATIONS.

EFFECTIVENESS(3-5-6-7-19-26-27)	RATING=B	(1.08)	3.08	-	2.93	-	3.32	(.93)	3.30	3.07	3.02	3.06	3.16	3.29
COMMUNICATION(1-4-8-15-20-24)	RATING=B	(1.00)	3.03	-	2.93	-	3.17	(.95)	3.14	2.95	2.89	2.94	3.02	3.11
STUDENT CONTACT(2-9-10-11-12-17-18)	RATING=B	(1.06)	2.87	+	2.90	-	3.15	(.97)	3.19	2.89	2.58	2.81	2.98	3.17
ASSIGNMENT(13-14-16-23-25)	RATING=B	(1.06)	2.99	-	2.93	-	3.09	(1.00)	3.12	2.87	2.68	2.84	2.95	3.08
EVALUATION(21-22)	RATING=C	(1.39)	2.51	-	2.14	-	3.22	(.98)	3.15	2.93	2.69	2.92	2.96	3.14

NUMBER OF OPTIONAL QUESTIONS	BL	NA	E	D	C	B	A	AND YOUR AVERAGE SCORE.	NUMBER	BL	NA	E	D	C	B	A	SCORE.
002	0	0	0	5	6	4	3	2.26	014	0	0	0	1	7	10	0	2.50
017	0	0	0	0	9	7	2	2.61	019	0	0	0	0	7	11	0	2.61
021	1	0	0	3	3	6	5	2.76	025	0	0	1	0	2	8	7	3.11
046	0	0	2	4	0	7	5	2.50	053	0	0	0	2	5	6	5	2.78
054	0	0	1	1	4	8	4	2.72	066	0	0	1	5	1	6	5	2.50
077	0	0	2	1	6	5	4	2.44	083	0	0	1	3	3	7	4	2.56
084	0	1	2	2	5	5	3	2.29	086	0	0	1	1	5	5	6	2.78
103	0	0	0	3	5	5	5	2.67	118	0	1	2	0	3	7	5	2.76

*RATING A=VERY GOOD, E=VERY POOR.
**YOUR DEPT. AVERAGES WERE BASED ON 3 COURSES AND 103 STUDENTS. UNIV. AVERAGES WERE BASED ON 90 COURSES AND 2123 REQUESTS.
***ALL DEPARTMENTAL AND CAMPUS WIDE NORMS ARE BASED ONLY ON THE COLORADO SPRINGS CAMPUS PARTICIPANTS

instructor in the extra large or extra small course or in the lower division or graduate level course could relate his results to courses comparable in size or level. Finally, the results can be related directly to teaching effectiveness and used both as a diagnostic tool and for the improvement of teaching.

The twenty-seven core questions have been assigned to five subscales by subjective procedures which were then revised slightly on a basis of a statistical analysis. The five subscales were labeled: I. Effectiveness, II. Communication, III. Student Contact, IV. Assignments and V. Evaluation. Each subscale score has high face validity. Each subscale, except IV., has a cronback alpha of .800 to .877. Subscale number IV. was .643. The five subscales are processed like the core questions above except no tally is given of the response frequencies. In addition, the five subscales plus the last two core questions have been normed for six subgroups at the University of Colorado and the average scores are presented for further comparisons. The six subgroups are 1) lower division, 2) upper division, 3) graduate, 4) small classes, 5) medium classes, and 6) large classes. For further evaluation and understanding of the results, the number of courses and number of students involved in the departmental and total University average scores is presented at the bottom of the page.

Thus, page one allows a quick summary of the F.C.Q. results by simply reading the A-E ratings of the five subscales and/or looking at the number of pluses and minuses received when these results are compared with the departmental participants and with the total number of university participants. For a more detailed analysis of the results, the individual questions can be investigated in depth and the subscales as well as questions 26 and 27 can be compared to the six subgroups within the university. The tally of response

frequencies and the standard deviations allows for further specific information about results. Some faculty have asked for tests of statistical differences and a factoring of the subscales but most of the faculty have rejected these two statistical procedures as unnecessary overkill of the questionnaire data.

Page two of the computerized feedback system is being developed to meet the needs of the faculty members who have little knowledge or use for statistical reports. It contains a triple profile that gives a picture of the relationship of each question's results for the individual faculty member compared to both the department and university participants averages. The 27 core questions and five subscales are ranked in high-to-low order for easier interpretation.

The remainder of the page two feedback consists of written comments about the results of the five subscale scores. A written explanation of a score was found to be easier to understand and greatly appreciated by faculty members who have difficulty interpreting the first page of numerical and statistical feedback. Following the interpretative comments, the faculty member is encouraged to investigate the specific questions that make up each subscale to determine whether the rating was consistent across all questions or unduly influenced by one or two specific questions. The pattern of responses is also emphasized and possible interpretations are suggested.

Page two also allows the possibility of promoting training seminars or workshops held by the Committee on Effective Teaching and encourages those with outstanding results to volunteer to help present such workshops.

Thus the F.C.Q. program presented above has overcome the ten most frequent criticisms given to the instruments available in this field.

Further development is underway and a few modifications are being considered which is another aspect of the flexibility of this paradigm. The availability of computer resources and mass data processing systems has opened the door to innovation in evaluation. I predict we are standing on the threshold of a fantastic breakthrough in this area as our testing and computer skills come together to create a new approach to an old problem.